FILED June 25, 2010 INDIANA UTILITY REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

SOUTHERN INDIANA GAS AND)	
ELECTRIC COMPANY)	
d/b/a VECTREN ENERGY)	CAUSE NO. 43839
DELIVERY OF INDIANA, INC.)	
(VECTREN SOUTH – ELECTRIC))	

DIRECT TESTIMONY

OF

CYNTHIA M. ARMSTRONG - PUBLIC'S EXHIBIT NO. 8

ON BEHALF OF

THE INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

June 25, 2010

TESTIMONY OF CYNTHIA M. ARMSTRONG CAUSE NO. 43839 <u>VECTREN SOUTH-ELECTRIC</u>

1		I. Purpose and Qualifications
2	Q:	Please state your name and business address.
3	A:	My name is Cynthia M. Armstrong. My business address is 115 W. Washington
4		St., Suite 1500 South, Indianapolis, IN, 46204.
5	Q:	By whom are you employed and in what capacity?
6	A:	I am employed by the Indiana Office of Utility Consumer Counselor (OUCC) as a
7		Utility Analyst in the Electric Division.
8	Q:	Please describe your background and experience.
9	A:	I graduated from the University of Evansville in 2004 with a Bachelor of Science
10		degree in Environmental Administration. I graduated from Indiana University,
11		Bloomington, in May 2007 with a Master of Public Affairs degree and a Master
12		of Science degree in Environmental Science. I have completed internships with
13		the Environmental Affairs Department at Vectren in the spring of 2004, with the
14		U.S. Environmental Protection Agency in the summer of 2005, and with the U.S.
15		Department of the Interior in the summer of 2006. I also have obtained my
16		OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER)
17		Certification. I have been employed by the OUCC since May 2007. As part of
18		my continuing education at the OUCC, I attended the National Association of
19		Regulatory Utility Commissioners (NARUC) week-long seminar in East Lansing,

Michigan, and have completed 8-hour OSHA HAZWOPER refresher courses to
maintain my certification.

What is the purpose of your testimony?

A: The purpose of my testimony is to address Vectren South-Electric's (Vectren

A: The purpose of my testimony is to address Vectren South-Electric's (Vectren South or Petitioner) proposal to track emission allowance costs and revenues through the Reliability Cost and Revenue Adjustment (RCRA). I intend to supplement OUCC Witness Wes Blakely's testimony on this particular issue.

Q: What have you done to prepare for your presentation of testimony in this proceeding?

A: I reviewed the Verified Petition, Direct Testimony, and Exhibits submitted by the Petitioner in this Cause. I attended the IURC's hearing of the Petitioner's Case-in-Chief. I reviewed discovery provided to the OUCC by the Petitioner in this Cause and spoke with Vectren South technical staff to clarify some answers to discovery.

II. Retail Emission Allowance Expense

Q: Please explain Vectren South's proposal regarding retail emission allowance costs.
 A: Vectren South currently recovers a fixed level of expense associated with the cost of emission allowances (EAs) in base rates. Vectren South also has the authority

to track the incremental cost of SO_2 and NO_x emission allowances above the base rate level via its Qualified Pollution Control Property (QPCP) Operating Expense

Rider (OER). 1 Although Vectren South has had the authority to track incremental

emission allowance expenses, emission allowance expenses never rose above the

¹ See Cause Nos. 42248 and 42861. In 42861, Vectren South was granted approval to recover the incremental expense associated with SO₂ allowances only if the Warrick 4 Flue Gas Desulfurization (FGD)

system performed at or above a 96 percent removal efficiency.

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1 base level for Vectren South to exercise this authority. Since the OPCP OER 2 will be eliminated by this Cause, Vectren South will no longer have a tracking mechanism in place to track incremental emission allowances.³ Vectren South is 3 4 requesting to track emission allowance expenses above the test-year level via the 5 RCRA. Vectren South states the test-year level of emission allowance expense is \$515,108.⁴ 6 7 Q: Does the OUCC find Petitioner's proposal for retail emission allowance 8 expense to be reasonable? 9 A: The OUCC is not opposed to tracking emission allowance expenses attributed to 10 retail electricity sales above the base rate amount. However, the OUCC finds the 11 test-year level of retail EA expense recorded by Vectren South to be unreasonably 12 high. 13 O: Why does the OUCC believe the test-year amount of retail EA expense is 14 unreasonably high? 15 There are several reasons for the OUCC to draw this conclusion. First, according A: 16 to Vectren South's historical levels of EA expense, the test-year level of expense is five to ten times higher than the previous four years.⁵ Furthermore, EA 17 18 expense during the pro-forma year through March 2010 is also far lower than the

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² See Attachment CMA-3. In Vectren's last general rate case, Cause No. 43111, test year emission allowance expense was \$117,025. (See Cause No. 43111, Petitioner's Exhibit No. KAH-2, Schedule No. 2, pg. 13 of 36.)

Since the QPCP projects tracked by Vectren's ECR filings (*See* Cause Nos. 42861 and 42248) are now in service and used and useful, the capital costs of these projects are included in rate base for the purposes of this proceeding. Operation and maintenance expenses associated with these projects should be included in test year O&M expense for the purposes of calculating Vectren's revenue requirement in this Cause. Thus, the QPCP Capital Cost and QPCP Operating Expense Riders will no longer exist at the outcome of this case. *See* Indiana Code § 8-1-8.5-6.5 and 170 IAC 4-6-22.

⁴ See Direct Testimony of Petitioner's Witness, Scott Albertson, p. 15, lines 22-33, and p. 16, lines 1-3.

⁵ See Attachments CMA-1, CMA-4, and CMA-5. Any Retail EA expense incurred by Petitioner during the past five years is due solely to SO₂ allowances. For NO_x compliance, Petitioner has been able to rely on zero cost allowances.

expense recorded during the test year. 6 The main reason that the test-year EA expense is much higher than historical levels is due to Vectren South's purchase of 2,000 allowances in July 2008. Since Vectren South's EA inventory was primarily comprised of zero-cost allowances, this purchase drove up the weighted average inventory (WAI) cost of the EAs to \$32.38 per EA, a level that had not been experienced in the previous four years. Although Vectren South was consuming allowances at about the same or lower rate as previous years, it was now more expensive to consume the EAs because of the infusion of 2,000 higher priced allowances into Vectren's inventory.

Second, Vectren made an important lump-sum adjustment outside of the test year to correct past mistakes with the accounting for retail EA consumption expense. Before October 2009, Wholesale Power Margin (WPM) sales consumption of EAs were inadvertently included in the overall retail consumption of EAs. As part of the Settlement Agreement in Cause No. 43111, Vectren South is required to credit customers for 100 percent of the market value of all NO_x and SO₂ EAs it uses to back WPM sales through the RCRA. While the Company was crediting ratepayers for the allowances it used to back WPM sales through the RCRA, it was also recording these allowances as being consumed by retail customers, resulting in a double recovery and artificially increasing retail emission allowance expense. In October 2009, Vectren South increased Retail Allowance Inventory by 12,302 allowances at a value of \$107,673 to rectify over

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⁶ See Attachments CMA-1, CMA-4, and CMA-5.

⁷ See Attachment CMA-2.

two years of WPM sales consumption of retail EAs.⁸ This problem occurred during the test year, but the correction was not made until after the test year, thereby resulting in inaccurate test-year retail emission allowance expense.

Finally, the OUCC does not agree that the test-year amount for retail emission allowance expense will accurately reflect Vectren South's true need for emission allowances in forthcoming years. The test year fails to take into account the impact the Warrick Unit 4 FGD system will have on decreasing Vectren South's overall need to consume SO₂ emission allowances. The Warrick Unit 4 FGD scrubber was placed into service in December 2008. Since the scrubber was placed in service, Vectren South's overall monthly emissions and EA consumption has decreased by at least two-thirds when compared to previous years. 10 As a result, Vectren South's consumption of SO₂ emission allowances in the future should decrease, even when the company is subject to an increased SO₂ EA retirement rate under the Clean Air Interstate Rule (CAIR) beginning in 2010. What level of retail EA expense does the OUCC find reasonable to use in calculating the revenue requirement for this Cause? The OUCC recommends using a five-year historical average to calculate the testyear retail EA expense. A five-year historical average not only provides a more representative sample of the actual EA expenses Vectren South can expect to incur during a year, but also incorporates the impact of at least one full year of the

Warrick Unit 4 FGD's operation. Furthermore, a five-year historical average will

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⁸ See Attachments CMA-1 and CMA-2. The overall impact of this adjustment resulted in a net increase to Retail Allowance Inventory of 11,826 allowances and a credit of \$104,124 to the October 2009 Emission Allowance consumption expense.

⁹ See Direct Testimony of Petitioner's Witness, Ronald Jochum, p. 4, lines 8-9.

¹⁰ See Attachments CMA-5, CMA-6, and CMA-7.

include the significant adjustment Vectren South made to its Retail Allowance Inventory to remove EAs consumed by WPM sales. Based on the most current data that Vectren South has provided regarding its historical emission allowance consumption expense, the OUCC recommends \$135,627 be used as the base level for retail emission allowance expense. OUCC Witness Thomas Catlin has reflected this adjustment for the purposes of calculating the revenue requirement in this Cause.

Q: You mentioned earlier that the OUCC is not opposed to tracking EA expense above the test year level via the RCRA. Please explain.

While retail EA expense is not as significant when compared to Vectren South's overall operation and maintenance expenses, the OUCC is not opposed to tracking emission allowance expense via the RCRA. As the test year shows, one major purchase of allowances can significantly change Vectren South's cost of consuming allowances. Thus, the OUCC believes that in Vectren South's case, EA costs could be volatile on a year-to-year basis.

Another aspect the OUCC generally considers in reviewing whether it is reasonable for a utility to track emission allowance expense is whether the company has acted prudently in the past to avoid reliance on the emission allowance market for compliance. It is completely within the company's control to decide its level of participation within the SO_2 and NO_x allowance markets. Vectren South has taken steps to minimize its reliance on the EA markets by installing selective catalytic reduction (SCR) units and FGDs on all of its baseload units, resulting in these units performing either at or better than current federal

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¹¹ See Attachment CMA-5.

emission standards, and Vectren South has generally managed its emission allowance portfolio well.

Q:

A:

Since the QPCP OER tracking mechanism will no longer exist at the conclusion of this case, the RCRA provides an appropriate tracking mechanism for emission allowance expenses, especially since EA revenues are also tracked and credited back to ratepayers through the RCRA.

Are there any other recommendations the OUCC has regarding the tracking of retail emission allowance expenses?

Yes. If Vectren South intends to track EA costs above the OUCC's recommended test year level, then it should credit ratepayers with 100 percent of the revenues from the sale of retail emission allowances. In the past, the OUCC agreed to an EA revenue sharing mechanism with Vectren South in order to pass back benefits associated with the installation of expensive pollution control projects to consumers. In Cause No. 42248, Vectren South agreed to share 80 percent of the proceeds from the sale of NO_x allowances with customers, while the company would keep 20 percent of the proceeds. Likewise, in Cause No. 42861, Vectren South agreed to share 90 percent of the proceeds from the sale of SO_2 allowances with ratepayers, while the Company would retain 10 percent.

However, these sharing mechanisms may provide a disincentive to Vectren South to manage the sales and purchases of emission allowances in a prudent manner. If Vectren South passes 100 percent of the costs of purchasing and consuming EAs to customers, but receives 10 to 20 percent of the proceeds from selling EAs, then the potential exists for Vectren South to purchase emission allowances for the sole purpose of reselling these allowances in order to earn a

profit at the expense of ratepayers. Vectren South would also have an incentive to buy allowances that are not needed to meet current retail consumption needs in the hopes of selling these allowances for a profit at some later date. It is unreasonable to expect ratepayers to pay all of the costs of purchasing EAs, but only receive a portion of the benefits when those allowances are sold.

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Other Indiana electric investor-owned utilities that track emission allowances currently credit ratepayers with 100 percent of the net proceeds from the sale of allowances. This is true of both Duke Energy Indiana, Inc.'s and Indiana Michigan Power's emission allowance tracking mechanisms. If the Commission approves Vectren South's request to track retail emission allowance expense, then the OUCC recommends that Vectren South also credit ratepayers with all of the proceeds from the sale of allowances.

13 Q: What type of allowances does the OUCC specifically recommend Vectren South track through the RCRA?

15 A: The OUCC recommends the Commission only approve Vectren South to recover
16 the retail costs of SO2, NO_x Seasonal, and NO_x Annual Allowances at this time.
17 Federal and state regulations currently allow these markets to exist. The EA
18 tracking portion of the RCRA should not automatically allow for the recovery of
19 CO₂ allowances, as carbon is currently unregulated by the federal government or
20 the State of Indiana.

21 Q: Is the OUCC opposed to Vectren South tracking CO₂ allowances in the future?

A: No. While the OUCC would recognize CO₂ allowances as a legitimate cost of service if federal or state carbon cap and trade legislation were to be passed, the

OUCC does not believe these costs should be automatically passed through to customers without Commission approval. Carbon legislation will significantly affect all Indiana electric utilities, just as the Title IV Acid Rain Program impacted electric utilities in the early 1990s.

Indiana electric utilities were required to present environmental compliance plans for complying with the 1990 Clean Air Act Amendments to the Commission during the 1990s. Indiana electric utilities should also present environmental compliance plans for carbon based on updated integrated resource planning models. While relying on the emission allowance market for CO₂ allowances may present the least cost environmental compliance strategy during the early years of a potential carbon cap and trade program, other compliance strategies may be just as effective. Requiring Vectren South (and other utilities) to present an environmental compliance plan for managing CO₂ emissions before the company is approved to track CO₂ EA costs will result in a well-planned, least-cost carbon compliance plan that provides the maximum benefit for ratepayers.

III. Emission Allowances Used to Back WPM Sales

17 Q: What is Vectren South proposing with respect to EAs consumed to generate WPM sales?

19 A: Vectren South proposes to continue crediting ratepayers with 100 percent of the
20 market value of EAs used to back WPM sales via the RCRA. 12

¹² See Direct Testimony of Petitioner's Witness, Scott Albertson, p. 16, lines 2-3.

Q: Does the OUCC support the continued tracking of EAs used by WPM?

A: Yes, the OUCC considers the WPM emission allowance credit to be beneficial for consumers. However, the OUCC is concerned that a situation may arise where Vectren South's average inventory cost of allowances may exceed the market price of the allowance. Recently, both the NO_x and SO₂ emission allowance markets have declined dramatically in price within the past two years due to the regulatory uncertainty of CAIR. For example, SO₂ allowances were recently trading as low as \$25 per allowance. ¹³ During the test year, Vectren's WAI of SO₂ allowances increased to about \$33 per allowance. Although the market price of EAs remained above Vectren South's WAI during the test year period, given recent declines in the price of emission allowances, it is possible that Vectren South's WAI could exceed the market price in the future. In those cases, ratepayers would incur a loss if WPM consumed these allowances, as Vectren South credits ratepayers with the net proceeds from WPM EAs.

Q: What does the OUCC recommend to resolve this concern?

A: The OUCC agrees that crediting ratepayers with 100 percent of the market value of EAs consumed by WPM sales is reasonable. However, a provision should be added to the RCRA tariff in order to protect ratepayers from the situation described above. If the EA market price is lower than Vectren South's retail WAI, the OUCC recommends Vectren South be required to purchase allowances directly from the market instead of consuming its higher-cost retail allowances from its inventory. If this is not possible, then the OUCC recommends Vectren

South credit ratepayers at Vectren South's WAI for the cost of consuming those allowances, as well as reimburse any costs incurred in order to purchase replacement emission allowances due to a shortfall resulting from WPM's usage of retail allowances.

IV. Conclusion

5 Q: Please summarize your recommendations.

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- 6 A: For the reasons I have outlined in my testimony above, my recommendations are
 7 as follows:
 - 1. A five-year historical average should be used to calculate the test-year retail EA expense. Based on the most current data that Vectren South has provided regarding its historical emission allowance consumption expense, the OUCC recommends \$135,627 be used as the base level for retail emission allowance expense.
 - 2. The OUCC is not opposed to tracking retail emission allowance expense above the OUCC's recommended test year level via the RCRA. The OUCC agrees that the RCRA is the best mechanism to use for tracking retail emission allowance expense.
 - 3. If Vectren South plans to track EA costs above the OUCC's recommended test year level, then it should credit ratepayers with 100 percent of the proceeds from the sale of retail emission allowances.
 - 4. Vectren South should only be allowed to recover emission allowance expenses associated with SO_2 , Annual NO_x , and Seasonal NO_x allowances at this time. In the event CO_2 or any other pollutant becomes the subject of

- future regulation, Vectren South should seek Commission authority to track
 the new emission allowance costs at that time.
 - 5. Vectren South should continue crediting ratepayers with 100 percent of the market value of EAs used to back WPM sales via the RCRA. If the WAI cost of retail EAs is greater than the EA market price, Vectren South should be required to purchase allowances directly from the market rather than consume its higher-cost retail allowances from its inventory. Alternatively, Vectren South should credit ratepayers for the full cost of consuming any allowances at Vectren South's WAI, as well as any costs incurred by retail customers to purchase replacement emission allowances.
- 11 **Q:** Does this conclude your testimony?
- 12 A: Yes.

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Cause No. 43839 OUCC Attachment CMA-1 Vectren South Response to OUCC Data Request 18-1 Pg 1 of 4

- **DR 18 Q-1.** With the elimination of the QPCP OER, please state whether Vectren intends to continue tracking NO_x and SO₂ allowances necessary for environmental compliance?
 - a. If yes, please indicate how Vectren intends to continue tracking NO_x and SO_2 allowances.
 - b. Please provide test year SO₂, NO_x Annual, and NO_x Seasonal monthly emission allowance inventories for vintage years 2008, 2009, and 2010, and the respected weighted average cost for each inventory.
 - c. Please provide NOx and SO₂ monthly emission allowance expenses over the past five (5) calendar years.
 - d. Please provide NO_X and SO_2 monthly emission allowance revenues over the past five (5) calendar years.

Response:

a. Vectren South objects to this request to the extent that it is vague and ambiguous. Notwithstanding the objection, Vectren South offers the following response:

With respect to tracking the cost of NO_x and SO_2 allowances, Vectren South is proposing to include requests for recovery of these costs, as well as the cost of other allowances as necessary to achieve environmental compliance, in the RCRA. This proposal is discussed in Mr. Albertson's Revised Direct Testimony on page 13 of 23 at lines 13-25.

- b. Please see attached document titled Exhibit DR18 Q-1b. Vectren South's NOx allowances carry no book value.
- c. Please see attached document titled Exhibit DR18 Q-1b for the monthly SO2 emission allowance expense for 2006 through March 2010. There is no retail NOx allowance expense booked during this time period.
- d. Please reference the documents provided in response OUCC DR16 Q-1 for actual revenues on the sales of emission allowance credited to retail customers via the RCRA from August 2007 through December 2009.

Vectren South-Electric Cause No. 43839 OUCC DR18 Q-1b Emission Allowance Expense History - Retail only Cause No. 43839 OUCC Attachment CMA-1 Vectren South Response to OUCC Data Request 18-1 Pg 2 of 4

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1 2 3	EA Tons Used (Retail Only) Average Rate - Inventory EA Expense - Used (Retail Only)	nuary-06 538.9500 2.72 6,905.35	2	ebruary-06 2,133.5500 2.72 5,802.75	March-06 2,591.9500 2.72 7,049.49		April-06 2,248.2000 2.72 6,114.57	\$ May-06 2,579.4000 2.72 7,015.36	June-06 2,482.0000 2.72 6,750.46	July-06 2,189.3100 2.72 5,954.41	August-06 2,923.8500 2.72 7,952.18		eptember-06 2,663.2500 2.72 7,243.42	\$	October-06 2,557.1000 2.72 6,954.70		November-06 2,095.4500 2.72 5,699.13	\$	December-06 1,227.1500 2.72 3,337.56	\$	Total 2006 28,230.1600 76,779.38	2
5	EA Tons Used (Retail Only) Average Rate - Inventory EA Expense - Used (Retail Only)	nuary-07 347.2000 1.28 3,003.02		2,058.8000 1.28 2,634.03	\$ March-07 1,913.1000 1.74 3,320.13	\$	April-07 2,065.3000 1.74 3,584.26	\$ May-07 2,518.0500 1.74 4,369.99	\$ <u>June-07</u> 2,120.9500 1.74 3,680.85	July-07 2,417.4500 1.74 4,195.42	August-07 2,731.4500 1.74 4,740.36		eptember-07 1,400.1040 1.74 2,429.85	\$	October-07 2,311.6240 1.74 4,011.75	_	November-07 2,484.5620 1.74 4,311.88		2,527.6060 1.74 4,386.59	\$	Total 2007 26,896.1960 44,668.13	5
7 8 9	EA Tons Used (Retail Only) Average Rate - Inventory EA Expense - Used (Retail Only)	nuary-08 233.0540 0.48 1,076.20		ebruary-08 2,533.5550 0.48 1,221.02	\$ March-08 2,163.1520 0.48 1,042.51	\$	April-08 2,784.6680 0.48 1,342.05	\$ May-08 2,325.0610 0.48 1,120.55	\$ June-08 2,997.4420 0.48 1,444.59	\$ July-08 2,870.8700 32.38 92,961.97		\$	eptember-08 3,248.6020 32.38 105,193.35		October-08 2,895.9500 32.38 93,774.10	_	November-08 1,361.9020 32.38 44,099.90	_	December-08 1,529.5000 32.38 49,526.92	\$	Total 2008 29,727.3720 482,939.74	8
11	EA Tons Used (Retail Only) Average Rate - Inventory EA Expense - Used (Retail Only)	\$ nuary-09 544.8110 7.45 11,515.12	1	046.4550 7.39 7,735.31	\$ March-09 648.8530 7.55 4,901.65	\$ \$	April-09 600.5010 7.45 4,476.18	\$ May-09 608.4120 7.45 4,535.21	\$ June-09 838.6590 7.45 6,251.27	\$ July-09 756.5590 7.45 5,639.44	\$ August-09 690.3590 7.45 5,145.99			\$ (October-09 11,826.2974) 8.80 (104,124.07)	\$	November-09 632.7201 7.76 4,907.82		December-09 629.7397 8.31 5,233.72	\$	Total 2009 (3,261.9776) (39,554.03)	11
14	EA Tons Used (Retail Only) Average Rate - Inventory EA Expense - Used (Retail Only)	nuary-10 756.6259 7.87 5,956.31	\$ \$ \$	688.4068 7.87 5,419.27	\$ March-10 607.5019 7.90 4,797.51	\$	<u>April-10</u> -	\$ <u>Maγ-10</u> -	\$ June-10 -	\$ <u>July-10</u> -	\$ August-10 -	<u>s</u> \$	eptember-10 -	\$	October-10	\$	November-10 -	<u>ı</u> \$	December-10 -	\$	Total 2010 2,052.5346 16,173.09	14
17	EA Tons Used (Retail Only) Average Rate - Inventory EA Expense - Used (Retail Only)	\$ July-08 870.8700 32.38 92.961.97	\$	2,783.6160 32.38 90.136.58	\$ eptember-08 3,248.6020 32.38 105.193.35		October-08 2,895.9500 32.38 93.774.10	\$ November-08 1,361.9020 32.38 44.099.90	\$ December-08 1,529.5000 32.38 49.526.92	\$ January-09 1,544.8110 7.45 11.515.12	\$ February-09 1,046.4550 7.39 7.735.31	\$	March-09 648.8530 7.55 4.901.65	\$	April-09 600.5010 7.45 4.476.18		May-09 608.4120 7.45 4.535.21		June-09 838.6590 7.45 6.251.27	<u>I</u> \$	Total Test Year 19,978.1310 515.107.56	17

Cause No. 43839 OUCC Attachment CMA-1 Vectren South Response to OUCC Data Request 18-1 Pg 3 of 4

Vectren South-Electric Cause No. 43839 OUCC DR18 Q-1b Annual NOx Allowances

Annual NOX

Aimaariiox					
_	A.B. Brown	F. B. Culley	Warrick 4	Broadway	Total
Beginning Balance 2009	-	-	-	-	-
Issued (EPA)	2,645.00	2,470.00	1,006.00	15.00	6,136.00
Purchases / Transfers In	-	-	-	-	-
Relinquished for 2009	(1,718.00)	(1,022.00)	(740.00)	(25.00)	(3,505.00)
Sold / Transfers Out	(775.00)	(425.00)	(300.00)	-	(1,500.00)
Other	635.00	1,084.00	255.00	15.00	1,989.00
Ending Balance 2009	787.00	2,107.00	221.00	5.00	3,120.00
	637.00	2,107.00	371.00	5.00	3,120.00

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Vectren South-Electric Cause No. 43839 OUCC DR18 Q-1b NOx Seasonal Allowances Cause No. 43839 OUCC Attachment CMA-1 Vectren South Response to OUCC Data Request 18-1 Pg 4 of 4

	Beginning	Prior Year	Pool			Early	State		Ending	Current Year	Adj Ending
Year	Balance	Emissions	Distribution	Purchased	Sold	Reduction	Reallocation	Other	Balance	Emissions	Balance
2008	2,789.00	(2,068.00)	2,619.00	-	(100.00)	-	17.00	83.00	3,340.00	(2,347.00)	993.00
AB Brown	1,561.00	(816.00)	1,127.00	-	(100.00)	-	17.00	(14.00)	1,775.00	(1,111.00)	664.00
Broadway	104.00	(18.00)	44.00	-	-	-	-	-	130.00	(41.00)	89.00
FB Culley	274.00	(1,035.00)	1,066.00	-	-	-	-	-	305.00	(939.00)	(634.00)
Warrick 4	660.00	(199.00)	382.00	-	-	-	-	10.00	853.00	(256.00)	597.00
Other	190.00	-	-	-	-	-	-	87.00	277.00	-	277.00
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	Beginning	Prior Year	Pool			Early	State		Ending	Current Year	Adj Ending
Year	Beginning Balance	Prior Year Emissions	Pool Distribution	Purchased	Sold	Early Reduction	State Reallocation	Other	Ending Balance	Current Year Emissions	Adj Ending Balance
Year 2009				Purchased -	Sold (1,168.00)	-		Other 47.00	•		
	Balance	Emissions	Distribution	Purchased - -		-	Reallocation		Balance	Emissions	Balance
2009	Balance 3,340.00	Emissions (2,347.00)	Distribution 2,619.00	Purchased - - -	(1,168.00)	-	Reallocation 33.00	47.00	Balance 2,524.00	Emissions (1,293.00)	Balance 1,231.00
2009 AB Brown	3,340.00 1,775.00	(2,347.00) (1,111.00)	2,619.00 1,127.00	Purchased	(1,168.00) (449.00)	-	Reallocation 33.00	47.00	Balance 2,524.00 1,345.00	(1,293.00) (639.00)	Balance 1,231.00 706.00
AB Brown Broadway	Balance 3,340.00 1,775.00 130.00	(2,347.00) (1,111.00) (41.00)	2,619.00 1,127.00 44.00	Purchased	(1,168.00) (449.00) (59.00)	-	Reallocation 33.00	47.00 - -	Balance 2,524.00 1,345.00	Emissions (1,293.00) (639.00) (12.00)	706.00 62.00

Cause No. 43839 OUCC Attachment CMA-2 Vectren South's Response to OUCC DR 20-25 Pg. 1 of 3

- **DR 20 Q-25.** Referring to Vectren's Attachment to OUCC DR 18, Question 1-b, please respond to the following:
 - a. Please explain why the EAs consumed by Vectren's retail customers may be more than monthly emissions from all of Vectren's generating units reported to the EPA. For example, during the test year, this situation occurred in November 08, January 09, February 09, and June 09.
 - b. Please explain why approximately 11,826 allowances were credited to retail customers in October 2009.
 - c. Please provide supporting calculations for the Weighted Average Cost of Inventory of allowances recorded.
 - d. Please explain why the WAI for SO₂ allowances increased from \$0.48 per ton in June 2008 to \$32.48 per ton in July 2008.

Response:

- a. Vectren South objects to this on the ground that it is vague and ambiguous and provides no basis from which Petitioner can determine what information is sought.
- b. During October 2009, it was discovered that the SO2 allowances recorded as used for retail customers and expensed included allowances used by wholesale power marketing ("WPM") activities. In October, a correction was made to increase Retail Allowance inventory by 11,826 and credit expense for WPM activities as these items are tracked separately and passed back to customers via the RCRA.
- c. Please see attached document titled Exhibit DR20 Q-25c, which reflects the calculation of the weighted average cost of SO2 allowances in inventory used for each period. Please note that December 2009 emission allowance tons have been revised from the amount provided in DR18 Q-1. The amount originally noted was incorrect.
- d. In July 2008, Vectren South-Electric purchased 2000 emission allowances at the market price of \$356.63 per allowance, in anticipation of stricter SO2 emission rates as a result of the CAIR Rules. At the time of purchase, the cost of emission allowances were less than the marginal cost to remove additional tons of emissions.

Vectren South-Electric Cause No. 43839 OUCC DR20 Q-25c SO2 Emission Allowance Inventory Cause No. 43839 OUCC Attachment CMA-2 Vectren South's Response to OUCC DR 20-25 Pg. 2 of 3

	Beg Balance	Pool Distribution		Purchased	Surrendered					Ending Balance	Beginning	Purchased		Weighted Avg				Adjustments	
Month @1/1/97	(tons) 67,886.0000	(tons)	Vintage Year	(tons)	(tons)	Donated (tons)	Sold (tons)	Used (tons)	Adjusted (tons)	(tons) 67,886.0000	Balance (\$)	(Total \$)	Cost per Ton	Cost	Donated (\$)	Sold (\$)	Used (\$)	(\$)	Ending Balance (\$)
Jan-97	67,886.0000			-			607.1556	2,292.9800	-	64,985.8644									
Feb-97 Mar-97	64,985.8644 62,390.6804						412.6440 773.9421	2,182.5400 2,336.1000	-	62,390.6804 59,280.6383									
Apr-97	59,280.6383						697.1809	1,257.7000	-	57,325.7574									
May-97 Jun-97	57,325.7574 54,266,9821		1996	5,000.0000			1,187.8753 602.1717	1,870.9000 1,788.6800	-	54,266.9821 56,876,1304	\$ -	\$ 523,750.00	104.75	\$ 8.84		\$ 5,321.47	\$ 15,806.80		\$ - \$ 502,621.73
Jul-97	56,876.1304		1000	0,000.000			426.1859	2,726.4000	-	53,723.5445	\$ 502,621.73	020,100.00		\$ 8.84		\$ 3,766.26	\$ 24,093.55		\$ 474,761.92
Aug-97 Sep-97	53,723.5445 51.299.2381						315.6964 1,046.5075	2,108.6100 3,155.1175	-	51,299.2381 47,097.6131	\$ 474,761.92 \$ 453,338.01			\$ 8.84 \$ 8.84			\$ 18,634.06 \$ 27.882.18		\$ 453,338.01 \$ 416.207.71
Oct-97	47,097.6131						498.6784	2,532.4900	-	44,066.4447	\$ 416,207.71			\$ 8.84		\$ 4,406.89	\$ 22,379.94		\$ 389,420.88
Nov-97 Dec-97	44,066.4447 42,045.7104						506.1343 364.9271	1,514.6000 (4,374.2167)	-	42,045.7104 46,055.0000	\$ 389,420.88 \$ 371,563.39			\$ 8.84 \$ 8.84		.,	\$ 13,384.72 \$ (38,655.52)		\$ 371,563.39 \$ 406,994.00
Jan-98	46,055.0000	43,050.0000				(16,000.0000)	1,004.4636	2,671.7321	-	69,428.8043	\$ 406,994.00			\$ 5.57		\$ 5,592.10	\$ 14,874.21		\$ 386,527.69
Feb-98 Mar-98							771.6533 905.3876	2,261.1292 2,922.1748	-	66,396.0218 62,568.4594	\$ 386,527.69 \$ 369,643.42			\$ 5.57 \$ 5.57			\$ 12,588.28 \$ 16,268.48		\$ 369,643.42 \$ 348,334.42
Apr-98	62,568.4594						514.1961	2,379.1820	-	59,675.0813	\$ 348,334.42			\$ 5.57		\$ 2,862.66	\$ 13,245.51		\$ 332,226.25
May-98 Jun-98	59,675.0813 56,790.8597		96 & '98	25,000.0000			784.6396 574.0254	2,099.5820 1,940.2020	-	56,790.8597 79,276.6323	\$ 332,226.25 \$ 316,169.06	\$ 2,942,750.00	117.71	\$ 5.57 \$ 39.84			\$ 11,688.90 \$ 77,306.45		\$ 316,169.06 \$ 3,158,740.83
Jul-98	79,276.6323		00 0 00	20,000.000			702.7223	2,514.4760	-	76,059.4340	\$ 3,158,740.83	Ψ Z,04Z,700.00		\$ 39.84		\$ 27,999.65	\$ 100,188.14		\$ 3,030,553.05
Aug-98 Sep-98	76,059.4340 72,480,1023						697.9137 724.7801	2,881.4180 1,964.9430	-	72,480.1023 69,790.3792	\$ 3,030,553.05 \$ 2,887,936,23			\$ 39.84 \$ 39.84			\$ 114,808.77 \$ 78,292.25		\$ 2,887,936.23 \$ 2,780,765.45
Oct-98	69,790.3792						16.3058	526.9400	-	69,247.1334	\$ 2,780,765.45			\$ 39.84		\$ 649.70	\$ 20,995.68		\$ 2,759,120.07
Nov-98 Dec-98	69,247.1334 68.543.2134						14.1800 315.0364	689.7400 (2.780.8443)	-	68,543.2134 71,009.0213	\$ 2,759,120.07 \$ 2,731.072.71			\$ 39.84 \$ 39.84			\$ 27,482.37 \$ (110,801.46)		\$ 2,731,072.71 \$ 2,829,321.69
Jan-99	71,009.0213	43,053.0000				(16,000.0000)	559.2973	1,373.4737	-	96,129.2503	\$ 2,829,321.69			\$ 28.85		\$ 16,137.05	\$ 39,627.97		\$ 2,773,556.67
Feb-99 Mar-99	96,129.2503 94.338.6063						435.1290 529.8318	1,355.5150 1.648.0542	-	94,338.6063 92.160.7203	\$ 2,773,556.67 \$ 2,721,892,34			\$ 28.85 \$ 28.85			\$ 39,109.82 \$ 47.550.27		\$ 2,721,892.34 \$ 2,659,055.17
Apr-99	92,160.7203						473.0733	1,744.2577	-	89,943.3893	\$ 2,659,055.17			\$ 28.85		\$ 13,649.29	\$ 50,325.97		\$ 2,595,079.91
May-99 Jun-99	89,943.3893 87,755,7913						412.0617 352.6221	1,775.5363	-	87,755.7913 85,470,1413	\$ 2,595,079.91 \$ 2.531.962.53			\$ 28.85 \$ 28.85			\$ 51,228.43 \$ 55,772.44		\$ 2,531,962.53 \$ 2,466,016.10
Jul-99	85,470.1413						535.8173	2,365.0727	-	82,569.2513	\$ 2,466,016.10			\$ 28.85		\$ 15,459.60	\$ 68,237.95		\$ 2,382,318.56
Aug-99 Sep-99	82,569.2513 79,931,5013						593.3632 232.9454	2,044.3868 1.528.4746	-	79,931.5013 78,170.0813	\$ 2,382,318.56 \$ 2.306.213.22			\$ 28.85 \$ 28.85			\$ 58,985.40 \$ 44,100.11		\$ 2,306,213.22 \$ 2.255.392.08
Oct-99	78,170.0813						523.0222	1,595.0078	-	76,052.0513	\$ 2,255,392.08			\$ 28.85		\$ 15,090.43	\$ 46,019.75		\$ 2,194,281.90
Nov-99 Dec-99	76,052.0513 74.201.4713						469.6065 461.0940	1,380.9735 1,664,7500	-	74,201.4713 72.075.6273	\$ 2,194,281.90 \$ 2.140.888.28			\$ 28.85 \$ 28.85		÷,	\$ 39,844.36 \$ 48,031.98		\$ 2,140,888.28 \$ 2.079.552.65
Jan-00	72,075.6273	25,572.0000	2000	10,000.0000			621.4308	2,447.8554	-	104,578.3411	\$ 2,079,552.65	\$ 910,000.00	91.00	\$ 27.77		\$ 17,258.16	\$ 67,980.99		\$ 2,904,313.50
Feb-00 Mar-00	104,578.3411 100.911.7273						450.1362 359.8957	3,216.4776 2,414.6043	-	100,911.7273	\$ 2,904,313.50 \$ 2,802,485.57			\$ 27.77			\$ 89,326.90 \$ 67.057.56		\$ 2,802,485.57
Apr-00							174.9624	2,904.8876	-	98,137.2273 95,057.3773	\$ 2,725,433.11			\$ 27.77 \$ 27.77			\$ 80,673.53		\$ 2,725,433.11 \$ 2,639,900.59
May-00 Jun-00	95,057.3773						185.5495 134.0681	2,592.6505 2,749.5319	-	92,279.1773	\$ 2,639,900.59			\$ 27.77			\$ 72,002.19 \$ 76.359.05		\$ 2,562,745.38
Jul-00 Jul-00	92,279.1773 89,395.5773						159.4368	4,078.3632	-	89,395.5773 85,157.7773	\$ 2,562,745.38 \$ 2,482,663.04			\$ 27.77 \$ 27.77		\$ 4,427.82	\$ 76,359.05 \$ 113,262.89		\$ 2,482,663.04 \$ 2,364,972.32
Aug-00							75.2142	1,151.7358	-	83,930.8273	\$ 2,364,972.32			\$ 27.77			\$ 31,985.61		\$ 2,330,897.89
Sep-00 Oct-00							285.9143 410.3010	2,322.8357 2,364.2490	-	81,322.0773 78,547.5273	\$ 2,330,897.89 \$ 2,258,448.59			\$ 27.77 \$ 27.77			\$ 64,508.99 \$ 65,659.11		\$ 2,258,448.59 \$ 2,181,394.74
Nov-00	78,547.5273						191.2394	2,052.6106	-	76,303.6773	\$ 2,181,394.74			\$ 27.77		\$ 5,311.03	\$ 57,004.39		\$ 2,119,079.32
Dec-00 Jan-01	76,303.6773 73,431.5773	25,573.0000	2001	10,000.0000			431.1914 469.0631	2,440.9086 2,747.0369	-	73,431.5773 105,788.4773	\$ 2,119,079.32 \$ 2,039,316.35	\$ 897,500.00	89.75	\$ 27.77 \$ 26.94			\$ 67,788.07 \$ 74,011.05		\$ 2,039,316.35 \$ 2,850,167.74
Feb-01	105,788.4773						396.8198	2,057.5902	-	103,334.0673	\$ 2,850,167.74			\$ 26.94			\$ 55,435.88		\$ 2,784,040.68
Mar-01 Apr-01	103,334.0673 100,645.0173						560.2636 195.8595	2,128.7864 1,812.9405	-	100,645.0173 98,636.2173	\$ 2,784,040.68 \$ 2,711,591.92			\$ 26.94 \$ 26.94			\$ 57,354.06 \$ 48,844.49		\$ 2,711,591.92 \$ 2,657,470.56
May-01	98,636.2173						558.5554	2,448.3946	-	95,629.2673	\$ 2,657,470.56			\$ 26.94			\$ 65,964.98		\$ 2,576,456.90
Jun-01 Jul-01	95,629.2673 92,804.5673						259.6680 342.1602	2,565.0320 3,004.9398	-	92,804.5673 89,457.4673	\$ 2,576,456.90 \$ 2,500,353.44			\$ 26.94 \$ 26.94			\$ 69,107.45 \$ 80,959.50		\$ 2,500,353.44 \$ 2,410,175.41
Aug-01	89,457.4673						289.5723	2,943.2777	-	86,224.6173	\$ 2,410,175.41			\$ 26.94		0 1,001.70	\$ 79,298.19		\$ 2,323,075.53
Sep-01 Oct-01	86,224.6173 84,570.4673						61.9739 202.0390	1,592.1761 2,657.4610		84,570.4673 81,710.9673	\$ 2,323,075.53 \$ 2,278,509.19			\$ 26.94 \$ 26.94		.,	\$ 42,896.63 \$ 71,597.68		\$ 2,278,509.19 \$ 2,201,468.15
Nov-01	81,710.9673						463.2119	2,389.4881	-	78,858.2673	\$ 2,201,468.15			\$ 26.94			\$ 64,377.92		\$ 2,124,610.31
Dec-01 Jan-02	78,858.2673 56,391.3673	25,572.0000	2002	5,000.0000			20,322.4293 382.2502	2,144.4707 2,626.1298	-	56,391.3673 83,954.9873	\$ 2,124,610.31 \$ 1,519,303.99	\$ 448,750.00	89.75	\$ 26.94 \$ 22.63			\$ 57,776.63 \$ 59,431.52		\$ 1,519,303.99 \$ 1,899,971.82
Feb-02							298.1497	2,046.9003	-	81,609.9373	\$ 1,899,971.82 \$ 1,846,901.37			\$ 22.63			\$ 46,323.07		\$ 1,846,901.37
Mar-02 Apr-02	81,609.9373 79,190.8373						278.1627 253.9906	2,140.9373 2,938.4094	-	79,190.8373 75,998.4373	\$ 1,846,901.37 \$ 1,792,155.11			\$ 22.63 \$ 22.63		,	\$ 48,451.21 \$ 66,498.67		\$ 1,792,155.11 \$ 1,719,908.42
May-02	75,998.4373						273.4881	3,226.1619	-	72,498.7873	\$ 1,719,908.42			\$ 22.63			\$ 73,010.75		\$ 1,640,708.40
Jun-02 Jul-02	72,498.7873 69,515.2873						277.3749 202.6392	2,706.1251 3,085.4108	-	69,515.2873 66,227.2373	\$ 1,640,708.40 \$ 1,573,189.30			\$ 22.63 \$ 22.63			\$ 61,241.88 \$ 69,825.44		\$ 1,573,189.30 \$ 1,498,777.96
Aug-02	66,227.2373					-	107.7917	3,203.6583	-	62,915.7873	\$ 1,498,777.96			\$ 22.63			\$ 72,501.48		\$ 1,423,837.07
Sep-02 Oct-02	62,915.7873 59,525.5373						161.6520 204.2599	3,228.5980 2,760.6901	-	59,525.5373 56,560.5873	\$ 1,423,837.07 \$ 1,347,112.86			\$ 22.63 \$ 22.63		,	\$ 73,065.88 \$ 62,476.73		\$ 1,347,112.86 \$ 1,280,013.56
Nov-02	56,560.5873						230.2417	2,746.8083	-	53,583.5373	\$ 1,280,013.56			\$ 22.63		\$ 5,210.56	\$ 62,162.58		\$ 1,212,640.42
Dec-02 Jan-03	53,583.5373 50,680.8873	25,589.0000					247.7408 417.7593	2,654.9092 2,618.8407	-	50,680.8873 73,233.2873	\$ 1,212,640.42 \$ 1,146,951.02			\$ 22.63 \$ 15.04		,	\$ 60,082.82 \$ 39,382.28		\$ 1,146,951.02 \$ 1,101,286.45
Feb-03	73,233.2873						878.8792	1,525.3208	-	70,829.0873	\$ 1,101,286.45			\$ 15.04		\$ 13,216.64	\$ 22,937.86		\$ 1,065,131.95
Mar-03 Apr-03	70,829.0873 69,769.3873						242.7220 706.5405	816.9780 3,736.5595	-	69,769.3873 65,326.2873	\$ 1,065,131.95 \$ 1,049,196.12			\$ 15.04 \$ 15.04		0,000.01	\$ 12,285.76 \$ 56,190.60		\$ 1,049,196.12 \$ 982,380.53
May-03	65,326.2873						50.3675	1,385.3325	-	63,890.5873	\$ 982,380.53			\$ 15.04		\$ 757.43	\$ 20,832.71		\$ 960,790.39
Jun-03 Jul-03	63,890.5873 60,864.1373						36.0040 390.0134	2,990.4460 3,081.0366	-	60,864.1373 57,393.0873	\$ 960,790.39 \$ 915,278.46			\$ 15.04 \$ 15.04			\$ 44,970.50 \$ 46,332.81		\$ 915,278.46 \$ 863,080.60
Aug-03	57,393.0873						344.6560	3,174.9940	-	53,873.4373	\$ 863,080.60			\$ 15.04		\$ 5,182.96	\$ 47,745.75		\$ 810,151.90
Sep-03 Oct-03	53,873.4373 51,131.0873						568.5050 855.1135	2,173.8450 2,364.0365	-	51,131.0873 47,911.9373	\$ 810,151.90 \$ 768,912.27			\$ 15.04 \$ 15.04		\$ 8,549.21 \$ 12,859.25	\$ 32,690.41 \$ 35,550.52		\$ 768,912.27 \$ 720,502.51
Nov-03							303.9827	2,480.3473	-	45,127.6073	\$ 720,502.51			\$ 15.04		\$ 4,571.31			\$ 678,631.59

Vectren South-Electric Cause No. 43839 OUCC DR20 Q-25c SO2 Emission Allowance Inventory Cause No. 43839 OUCC Attachment CMA-2 Vectren South's Response to OUCC DR 20-25 Pg. 3 of 3

Post																				
Color Colo		Beg Balance	Pool Distribution		Purchased	Surrendered					Ending Balance	Beginning	Purchased		Weighted Avg				Adjustments	
Authors	Month	(tons)		Vintage Year			Donated (tons)				(tons)	Balance (\$)		Cost per Ton		Donated (\$)				
Color Colo			25 500 0000							=										
Mart			25,569.0000							-										
May		62,036.4873						444.0078	2,950.8922	-	58,641.5873	\$ 579,612.02			\$ 9.34		\$ 4,148.40 \$	27,570.43		\$ 547,893.19
Authors			2 2000							-										
March Marc			3.0000							-										
Sept										-										
										-										
Mode										-										
Dec										-										
Pett 1,000										-							\$ 9,788.53 \$			
More Co.			25,589.0000							-										
Applied Appl										-										
May March																				
Add A 1792727	May-05	46,855.6373						414.8017		-	44,604.9873	\$ 246,351.00			\$ 5.26		\$ 2,180.89 \$	9,652.27		\$ 234,517.84
Age 30 11 - - - - - - - - - - - - - - - - -		,								-							,			
Section Sect							(240,0000)			-						\$ (1.261.84)				
Marcol 13,114,6871							(210.000)			-						(1,201.01)		10,698.34		
Decolution										-							\$ 3,827.27 \$	8,048.74		
John 60 17.75.0073 25.545.0000										-										
Pable 1988 1988 1989			25,545,0000					9.5212		-							\$ 50.09 \$			
April	Feb-06	50,381.6373						-	2,133.5500	-	48,248.0873	\$ 137,026.17			\$ 2.72		\$ - \$	5,802.75		\$ 131,223.42
May-10 May-								-		-										
Aug 60 40,005,0073 - 2,462,0000 - 30,346,0373 5 111,044,00 5 2,77 5 - 5 7,504,6 3 104,205,00 5 1,777,04 1 5 2,200,0000 - 2,662,2000 - 2								-		-										
August 27.9 5.00 7.								-		_							7 7			
Second S								-		-							\$ - S			
Octob 26,970 (179) 2,951 (1900) 2,951 (1907) 3 7,776 (192) \$ \$ 6,964 (1) \$ 7,074 (93) No.00 2,931 (277) 2,934 (270) 2,934 (270) 3 2,934 (270) \$ 2,000 (270) \$ 2,000 (270) \$ 3,000 (270) \$ 3,000 (270) \$ 5,000 (270)								2 000 0000		-										
No-06 26,01.0273								2,000.0000		-							\$ 5,439.53 3 \$ - \$			
Sept. Sept								-		-							\$ - \$			
Feb										-										
Mar-07 41,209.4273			25,545.0000		-			-		-			*							
April Apri						11.518.0000				-			Φ -							
June 72 25,814.9773	Apr-07	30,398.3273				,				-	28,333.0273				\$ 1.74		\$ - \$	3,584.27		\$ 49,171.16
Aug 07 2,884 0,073 2,474 500 -2 2,785 773 5 4,120 31 5 1,74 5 - 5 4,740 5 5 3,692 4,89 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 3,214 5,49 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 3,214 5,49 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 3,214 5,49 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 3,214 5,49 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 Sep 07 15,485 1,73 5 1,74 5 - 5 4,740 5 5 Sep 08										-							: :			
Aug 07 21,276,5773 2,731,4500 -1 15,545,1273 S 36,624.89 S 1,74 S S 4,740.35 S 32,164.54 S 1,74 S S 2,429.84 S 2,275.75 C C C C C C C C C										-										
Col. or 17,145,0233										_										
Nov7 14,833.9897										-										
Dec-07 12,448.873 2,545.000 2,2672.0600 - 9,2672.313 8 1,744 8 - 8 4,386.59 5 17,044.46 8 - 8 1,704.72 1,546.20										-										
Jan-08 9,821 231 25,456 0000 2,233 0540 2,233 0540 2,233 0540 2,233 0540 2,33 153 1773 3,133 1773 1773 3,133 173 173 173 173 173 173 173 173 173										-										
Mar-08 30,599.6223 2,168.1650 - 28,458.4703 \$ 14,747.23 \$ 0.48 \$ - \$ 1,042.51 \$ 13,704.72 \$ 2,256.1610.23 \$ 13,704.72 \$ 0.48 \$ - \$ 1,042.51 \$ 13,704.72 \$ 0.48 \$ - \$ 1,042.51 \$ 13,704.72 \$ 0.48 \$ - \$ 1,042.51 \$ 13,704.72 \$ 0.48 \$ - \$ 1,042.51 \$ 13,704.72 \$ 0.48 \$ - \$ 1,120.51 \$ 12,925.67 \$ 0.48 \$ - \$ 1,120.51 \$ 12,925.67 \$ 0.48 \$ - \$ 1,120.51 \$ 12,925.67 \$ 0.48 \$ - \$ 1,120.51 \$		9,821.2313	25,545.0000						2,233.0540	-	33,133.1773	\$ 17,044.46					\$ - \$			\$ 15,968.26
Apr-08 28.484.7473 27.486.8680 27.486.8680 2.27.48 2.23.25 2.561.8023 3.1,704.72 \$ 0.48 \$ - \$ \$ 1,342.05 \$ 11,202.67										-							s - s			
May-08 25.551.8023 2.326.7413 2.326.7413 5 2.																	•			
Jul-08 20,329.2993 2,000.0000 2,707.0700 - 19,458.4293 5 9,797.54 5 713,250.00 5 3,238 5 - 5 9,913.65 5 530,904.00 S 8,92.81 S 8,94.90 S										-										
Aug-08 19,488 4293 2,783.6160 - 16,674.8133 \$ 630,086.58 \$ 32.38 \$ - \$ 90,136.58 \$ 539,949.00 Sep-08 16,674.8133 3,248.6020 - 13,426.2113 \$ 529,949.00 \$ 32.38 \$ - \$ 91,075.035 \$ 19,519.255 \$ 49,526.11 \$ 19,626.213 \$ 19,519.2613 \$ 19,519.2613 \$ 19,519.2613 \$ 19,519.2613 \$ 19,519.2613 \$ 19,519.2613 \$ 19,519.2613 \$ 18,619.4157 \$ 32.38 \$ - \$ 93,774.08 \$ 340,8157 De-08 9,188.3593 1,529.5000 - 7,638.8593 \$ 228,816.77 \$ 32.38 \$ - \$ 49,526.91 \$ 247,354.76 Jan-10 7,638.8593 2,545.0000 1,529.5000 - 7,638.8593 \$ 228,839.83 \$ 7,45 \$ 7,800.35 \$ 27,834.76 Jan-10 31,639.0483 3,089.25933 \$ 247,354.76 \$ 7,45 \$ 7,800.35 \$ 228,039.28 Mar-09 30,592.5933 \$ 3,445.856.5 \$ 7,45 \$ 7,800.35 \$ 228,039.28 Mar-09 29,943.7403 8 20,943.2393 \$ 223,022.69 \$ 7,45 \$ 7,800.35 \$ 8,218.26 Jun-09 28,734.2393 \$ 20,842.2393 \$ 21,829.20 \$ 7,45 \$ 7										-							7 7			
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Oit-08 13,426/2113 2,895,9500 - 10,530/2613 \$ 434,785,655 \$ 32.38 \$ - \$ 49,774,099 0 \$ 340,881.67 Nov-08 10,530/2613 1361,9020 - 7,638,8593 \$ 226,881.67 \$ 32.38 \$ - \$ 49,526.91 \$ 247,354.76 Dec-08 9,168,3593 25,545,0000 - 7,638,8593 \$ 247,354.76 \$ 7.45 \$ - \$ 49,526.91 \$ 236,839.63 Feb-09 31,639,0483 3 2,47,354.76 \$ 7.45 \$ - \$ 1,515.13 \$ 236,839.63 Mar-09 30,592,5933 23,834 \$ 7.45 \$ - \$ 1,750,035 \$ 28,839.63 Mar-09 30,592,5933 20,834,2333 \$ 228,039.28 \$ 7.45 \$ - \$ 4,836.59 \$ 228,039.28 Mar-09 29,934,32333 20,234,23333 \$ 223,202.69 \$ 7.45 \$ - \$ 4,836.59 \$ 23,202.69 May-09 29,734,8273 \$ 218,726.51 \$ 7.45 \$ - \$ 4,535.14 \$ 214,191.37 Jul-09 27,836,1633 30,234,2333																				
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Jan-09										-										
Feb-09 31,639 0,483 1,046 4,550 - 30,592 5,933 \$ 25,839 6,38 \$ 7,45 \$ 7,80 0,35 \$ 228,039 2,28 Mar-09 30,592 5,933 648,8530 - 29,943,7403 \$ 228,039 2,88 \$ 7,45 \$ - \$ \$ 7,80 0,35 \$ 228,039 2,28 Apr-09 29,943,7403 600,5010 - 29,343,2393 \$ 223,202,69 \$ 7,45 \$ - \$ \$ 4,836,59 \$ 232,202,69 May-09 29,943,7403 608,4120 - 28,734,8273 \$ 218,726,51 \$ 7,45 \$ - \$ \$ 4,551,4 \$ 214,791,37 Jul-09 28,734,8273 608,4120 - 28,734,8273 \$ 218,726,51 \$ 7,45 \$ - \$ \$ 4,555,14 \$ 214,791,37 Jul-09 27,139,603 5 7,45 \$ - \$ \$ 5,639,44 \$ 202,300,51 Aug-09 27,139,603 5 7,45 \$ - \$ \$ 5,639,44 \$ 202,300,51 Aug-09 27,139,603 5 7,45 \$ - \$ \$ 5,145,98 \$ 197,154,53 Sep-09 26,449,2503 690,3590 - 26,449,2503 \$ 202,300,51 \$ 7,45 \$ - \$ \$ 5,145,98 \$ 197,154,53 Sep-09 26,449,2503 690,3590 - 26,449,2503 7,708,2967 \$ 192,926,20 \$ 7,45 \$ - \$ \$ 3,549,30 \$ (107,673,37) \$ 297,050,27 Nov-09 37,708,2967 476,1561 (12,302,4535) 37,708,2967 \$ 192,926,20 \$ 7,45 \$ - \$ \$ 3,549,30 \$ (107,673,37) \$ 297,050,27 Dec-09 37,075,5766 5 9,050,27 \$ 1,788 \$ - \$ \$ 5,441,60 \$ (207,89) \$ 286,908,73 Jul-10 36,651,110 5 36,651,110 \$ 268,090,73 \$ 38,085,766 \$ 280,952,42 \$ 7,88 \$ - \$ \$ 6,703,76 \$ (918,39) \$ 275,533,15 Dec-09 37,075,5766 5 9,000,70 \$ 28,00			25 545 0000														7 7			
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May-09 29/343 2393 608 41/20 - 28/734 8273 \$ 218/726 51 \$ 7.45 \$ - \$ 4/535,14 \$ 214/191.37 Jul-09 28/734 8273 38.36590 - 27/139 6093 \$ 214/191.37 \$ 7.45 \$ - \$ 6/251.42 \$ 207,939.95 Jul-09 27/139 6093 \$ 27/139 6093 \$ 207,939.95 \$ 7.45 \$ - \$ 6/5.639.44 \$ 207,200.51 Aug-09 27/139 6093 \$ 20,300.51 \$ 7.45 \$ - \$ 5,145.98 \$ 202,200.51 Sep-09 26/449/2503 \$ 690.3590 - 26/449/2503 \$ 7.45 \$ - \$ 5,428.93 \$ 197,154.53 Oct-09 25/881/993 \$ 197,154.53 \$ 7.45 \$ - \$ 5,428.93 \$ 197,154.53 Nov-09 37/08/2967 \$ 7.45 \$ 7.45 \$ - \$ 3,549.30 \$ (107,673.37) \$ 297,050.27 Nov-09 37/08/2967 \$ 192,926.20 \$ 7.45 \$ - \$ 3,549.30 \$ (107,673.37) \$ 297,050.27 Dec-09 37/075/766 \$ 297,050.27 \$ 7.88		30,592.5933							648.8530	=	29,943.7403	\$ 228,039.28			\$ 7.45			4,836.59		\$ 223,202.69
Jun-09 28,734,8273 88,6590 - 27,896,1683 \$ 214,191,37 \$ 7,45 \$ - \$ 6,251,42 \$ 207,939,95 \$ 214,91,37 \$ 7,45 \$ 7,45 \$ 6,251,42 \$ 207,939,95 \$ 207,939,95 \$ 7,45										-										
Jul-09 27,886,1683 756,5590 - 27,139,6093 \$ 207,939,95 \$ 7,45 \$ - \$ 5,639,44 \$ 202,300,51 Sep-09 26,449,2503 567,2510 - 26,449,2503 \$ 202,300,51 \$ 7,45 \$ - \$ 5,639,44 \$ 202,300,51 Oct-09 25,881,9993 \$ 107,154,53 \$ 7,45 \$ - \$ 5,639,44 \$ 107,154,53 Nov-09 27,881,993 \$ 107,154,53 \$ 7,45 \$ - \$ 3,549,30 \$ (107,673,37) \$ 292,262 Nov-09 37,708,2967 \$ 12,926,20 \$ 7,45 \$ - \$ 3,549,30 \$ (107,673,37) \$ 297,050,27 Dec-09 37,075,5766 \$ 27,85 \$ 7,88 \$ - \$ 5,441,60 \$ (207,89) \$ 286,908,73 Jan-10 36,611,7369 4 (20,411,7369) <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																				
Sep-09 26,449,2503 567,2510 - 25,881,9993 \$ 197,154,53 \$ 7,45 \$ - \$ 4,228,33 \$ 192,926,20 \$ 192,926,20 \$ 7,45 \$ - \$ 4,228,33 \$ 192,926,20 \$ 7,45 \$ 7,45 \$ - \$ 4,228,33 \$ 192,926,20 \$ 27,88 \$ 7,88 \$ - \$ 3,541,77 \$ 297,050,27 \$ 7,88 \$ - \$ 3,561,77 \$ 1,346,06 \$ 292,142,44 \$ 7,88 \$ 7,88 \$ - \$ 5,41,60 \$ (207,89) \$ 286,908,73 \$ 1,346,01 \$ 208,142,44 \$ 7,88 \$ 7,88 \$ - \$ 5,41,60 \$ (207,89) \$ 286,908,73 \$ 8,12 \$ 7,88 \$ - \$ 6,337,66 \$ 208,908,73 \$	Jul-09	27,896.1683							756.5590	-	27,139.6093	\$ 207,939.95			\$ 7.45		\$ - \$	5,639.44		\$ 202,300.51
Oct-09 25.881.9993 476.1561 (12.302.4535) 37,708.2967 \$ 192,926.20 \$ 7.45 \$ - \$ 3,549.30 \$ (107,673.71) \$ 297,050.27 Nov-09 37,708.2967 452.1400 180.5801 37,075.5766 \$ 297,050.27 \$ 7.88 \$ - \$ 3,561.77 \$ 1,346.06 \$ 292,142.44 De-09 37,075.5766 \$ 297,050.27 \$ 7.88 \$ - \$ 5,441.60 \$ (207.89) \$ 286,908.73 Jan-10 36,411.7369 - 80,900.20 (42,4761) 35,655.1110 \$ 286,908.73 \$ 7.88 \$ - \$ 6,704.74 \$ (748.3) \$ 280,952.42 Feb-10 35,655.110 80,43000 (115.8932) 34,966.042 \$ 280,952.42 \$ 7.88 \$ - \$ 6,704.74 \$ (748.3) \$ 280,952.15										-										
Nov-09 37,708.2967 452.1400 180.5801 37,075.5766 297,050.27 \$ 7.88 \$ - \$ 3,561.77 \$ 1,346.06 \$ 292,142.44 Dec-09 37,075.5766 36,411.7369 \$ 292,142.44 \$ 7.88 \$ - \$ 5,41.60 \$ 296,090.73 Jan-10 36,411.7369 - \$ 7.88 \$ - \$ 6,704.74 \$ 70,880.24 Feb-10 35,655.1110 \$ 280,905.72 \$ 7.88 \$ - \$ 6,337.66 \$ 292,142.44 \$ 7.88 \$ - \$ 5,41.60 \$ 292,142.44 \$ 7.88 \$ - \$ 5,41.60 \$ 296,908.73 \$ 7.88 \$ - \$ 6,704.74 \$ 7(78.84) \$ 2.80,952.42 \$ 7.88 \$ - \$ 6,337.66 \$ 292,142.44 \$ 7.88 \$ 7.88 \$ - \$ 6,047.64 \$ 286,908.73 \$ 7.88 \$ 7.88 \$ 7.804.74 \$ 7.88 \$ <										(12 302 4535)									\$ (107.673.37)	
Dec-09 37,075.5766																	*			
Feb-10 35,655.1110 804.3000 (115.8932) 34,966.7042 \$ 280,952.42 \$ 7.88 \$ - \$ 6,337.66 \$ (918.39) \$ 275,533.15	Dec-09	37,075.5766							690.5897	(26.7500)	36,411.7369	\$ 292,142.44			\$ 7.88			5,441.60	\$ (207.89)	\$ 286,908.73
			-														7 7			
		35,655.1110							640.9040	(115.8932)	34,966.7042	\$ 280,952.42 \$ 275,533.15			\$ 7.88 \$ 7.88		s - 3			

Cause No. 43839 OUCC Attachment CMA-3 Vectren South Response to OUCC DR 20-26 Pg. 1 of 1

DR 20 Q-26. Please explain how emission allowance costs attributable to retail customers were tracked prior to this Cause.

Response: These costs were recovered in base rates at the level set forth in each rate case, and were not tracked.

VECTREN SOUTH ELECTRIC

Retail SO₂ Emission Allowance Consumption, July 2005-March 2010

	<u>July-05</u>	August-05	September-05	October-05	November-05	December-05	January-06	February-06	March-06	April-06	<u>May-06</u>	June-06	<u>Total</u>
1 EA Tons Used (Retail Only)	2,125.2120	2,342.0870	2,034.8112	1,530.8591	1,315.9707	2,071.4228	2,538.9500	2,133.5500	2,591.9500	2,248.2000	2,579.4000	2,482.0000	25,994.4128
2 Average Rate - Inventory	\$5.26	\$5.26	\$5.26	\$5.26	\$5.26	\$5.26	\$2.72	\$2.72	\$2.72	\$2.72	\$2.72	\$2.72	
3 EA Expense - Used (Retail Only)	\$11,178.62	\$12,319.38	\$10,703.11	\$8,052.32	\$6,922.01	\$10,895.68	\$6,905.94	\$5,803.26	\$7,050.10	\$6,115.10	\$7,015.97	\$6,751.04	\$99,712.52
	July-06	August-06	September-06	October-06	November-06	December-06	January-07	February-07	March-07	April-07	May-07	June-07	Total
4 EA Tons Used (Retail Only)	2,189.3100	2,923.8500	2,663.2500	2,557.1000	2,095.4500	1,227.1500	2,347.2000	2,058.8000	1,913.1000	2,065.3000	2,518.0500	2,120.9500	26,679.5100
5 Average Rate - Inventory	\$ 2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 1.28	\$ 1.28	\$ 1.74	\$ 1.74	\$ 1.74	\$ 1.74	•
6 EA Expense - Used (Retail Only)	\$ 5,954.41	\$ 7,952.18	\$ 7.243.42	\$ 6,954.70	\$ 5,699.13	\$ 3.337.56	\$ 3,003.02	\$ 2,634.03	\$ 3,320.13	\$ 3,584.26	\$ 4,369.99	\$ 3,680.85	\$ 57,733.68
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	July-07	August-07	September-07	October-07	November-07	December-07	January-08	February-08	March-08	April-08	May-08	June-08	<u>Total</u>
7 EA Tons Used (Retail Only)	2.417.4500	2.731.4500	1,400,1040	2,311.6240	2,484.5620	2.527.6060	2.233.0540	2.533.5550	2,163.1520	2,784.6680	2,325.0610	2,997.4420	28,909.7280
8 Average Rate - Inventory	\$ 1.74	\$ 1.74	\$ 1.74	\$ 1.74		\$ 1.74	\$ 0.48	\$ 0.48	\$ 0.48				•
9 EA Expense - Used (Retail Only)	\$ 4,195.42	\$ 4,740.36	\$ 2,429.85	\$ 4,011.75	\$ 4,311.88	\$ 4,386.59	\$ 1,076.20	\$ 1,221.02	\$ 1,042.51	\$ 1,342.05	\$ 1,120.55	\$ 1,444.59	\$31,323
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	July-08	August-08	September-08	October-08	November-08	December-08	January-09	February-09	March-09	April-09	May-09	June-09	Total
10 EA Tons Used (Retail Only)	2.870.8700	2.783.6160	3,248,6020	2,895.9500	1,361.9020	1,529,5000	1.544.8110	1.046.4550	648.8530	600.5010	608.4120	838.6590	19.978.1310
11 Average Rate - Inventory	\$ 32.38		\$ 32.38	\$ 32.38			.,	\$ 7.39	\$ 7.55				10,01011010
12 EA Expense - Used (Retail Only)	\$ 92,961.97		\$ 105,193.35	\$ 93,774.10					\$ 4,901.65			\$ 6,251.27	\$515,108
12 Ex Expense - Osca (Retail Only)	Ψ 32,301.37	Ψ 30, 130.30	Ψ 100, 100.00	Ψ 33,774.10	Ψ 44,000.00	Ψ 40,020.02	Ψ 11,515.12	Ψ 7,700.01	Ψ 4,501.00	Ψ -,-10.10	Ψ 4,000.21	Ψ 0,251.27	Ψ515,100
	July-09	August-09	September-09	October-09	November-09	December-09	January-10	February-10	March-10	Total (July 09-Mar 10)			
13 EA Tons Used (Retail Only)	756.5590	690.3590	567.2510	(11,826.2974)		629.7397	756.6259	688.4068	607.5019	(6,497.1340)	١		
14 Average Rate - Inventory	\$ 7.45		\$ 7.45	\$ 8.80	\$ 7.76		\$ 7.87	\$ 7.87	\$ 7.90	(5,457.1040)	,		
15 EA Expense - Used (Retail Only)									\$ 4.797.51	\$ (62,796)	1		

Note: Data presented for July 2005 through December 2005 was retrieved from Vectren South's Data Response to OUCC Request 20-25 (c), or OUCC Attachment CMA-2. Data presented for January 2006 through March 2010 was retrieved from Vectren South's Data Response to OUCC Request 18-1 (b), or OUCC Attachment CMA-1.

VECTREN SOUTH ELECTRIC Calculation of 5-Year Historical Average of Retail Allowance Expense

		April-05		<u>May-05</u>		<u>June-05</u>	<u>July-05</u>	August-05	September-05	October-05	November-05	December-05	<u>January-06</u>	February-06	March-06	<u>Total</u>
1 EA Tons Used (Retail Only)		2,680.6459		1,835.8483		2,527.6050	2,125.2120	2,342.0870	2,034.8112	1,530.8591	1,315.9707	2,071.4228	2,538.9500	2,133.5500	2,591.9500	25,728.9120
2 Average Rate - Inventory		\$5.26		\$5.26		\$5.26	\$5.26	\$5.26	\$5.26	\$5.26	\$5.26	\$5.26	\$2.72	\$2.72	\$2.72	
3 EA Expense - Used (Retail Only)		\$14,100.20		\$9,656.56		\$13,295.20	\$11,178.62	\$12,319.38	\$10,703.11	\$8,052.32	\$6,922.01	\$10,895.68	\$6,905.94	\$5,803.26	\$7,050.10	\$116,882.37
		April-06		May-06		<u>June-06</u>	<u>July-06</u>	August-06	September-06	October-06	November-06	December-06	January-07	February-07	March-07	<u>Total</u>
4 EA Tons Used (Retail Only)		2,248.2000		2,579.4000		2,482.0000	2,189.3100	2,923.8500	2,663.2500	2,557.1000	2,095.4500	1,227.1500	2,347.2000	2,058.8000	1,913.1000	27,284.8100
5 Average Rate - Inventory		\$2.72		\$2.72		\$2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 2.72	\$ 1.28	\$ 1.28	\$ 1.74	
6 EA Expense - Used (Retail Only)		\$6,115.10		\$7,015.97		\$6,751.04	\$ 5,954.41	\$ 7,952.18	\$ 7,243.42	\$ 6,954.70	\$ 5,699.13	\$ 3,337.56	\$ 3,003.02	\$ 2,634.03	\$ 3,320.13	\$65,980.69
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		April-07		May-07		June-07	July-07	August-07	September-07	October-07	November-07	December-07	January-08	February-08	March-08	Total
7 EA Tons Used (Retail Only)		2,065.3000		2,518.0500		2,120.9500	2,417,4500	2.731.4500	1,400.1040	2,311.6240	2,484.5620	2,527.6060	2,233.0540	2,533,5550	2,163,1520	27,506.8570
8 Average Rate - Inventory	\$			1.74	\$	1.74	\$ 1.74	\$ 1.74	\$ 1.74		\$ 1.74		\$ 0.48	\$ 0.48	\$ 0.48	,
9 EA Expense - Used (Retail Only)	\$	3,584.26	\$	4,369.99	\$	3,680.85	\$ 4.195.42	\$ 4.740.36	\$ 2,429.85	\$ 4.011.75	\$ 4.311.88	\$ 4.386.59	\$ 1,076.20	\$ 1,221.02	\$ 1.042.51	\$39,050.68
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		April-08		May-08		June-08	July-08	August-08	September-08	October-08	November-08	December-08	January-09	February-09	March-09	Total
10 EA Tons Used (Retail Only)		2.784.6680		2.325.0610		2.997.4420	2.870.8700	2.783.6160	3,248.6020	2,895.9500	1,361,9020	1.529.5000	1.544.8110	1,046.4550	648.8530	26.037.7300
11 Average Rate - Inventory	\$	0.48		0.48	\$	0.48	\$ 32.38	\$ 32.38	\$ 32.38		\$ 32.38	\$ 32.38		\$ 7.39	\$ 7.55	,
12 EA Expense - Used (Retail Only)	\$	1,342.05	\$	1,120.55	-		\$92,961.97	\$90,136.58	-	\$ 93,774.10			\$11,515.12	\$ 7.735.31	\$ 4.901.65	\$503,752.09
12 Extended Good (itolaii Grilly)	v	1,0 12.00	•	1,120.00	•	1, 111.00	4 02,001.01	4 00,100.00	\$ 100,100.00	00,111.10	V 11,000.00	♥ 10,020.02	V 11,010.12	V 1,100.01	1,001.00	4000,.02.00
		April-09		May-09		June-09	July-09	August-09	September-09	October-09	November-09	December-09	January-10	February-10	March-10	Total
13 EA Tons Used (Retail Only)		600.5010		608.4120		838.6590	756.5590	690.3590	567.2510	(11,826.2974)		629.7397	756.6259	688.4068	607.5019	(4,449.5620)
14 Average Rate - Inventory	_		_		•					,				\$ 7.87		(-1,5.5020)
	90		40													
15 EA Expense - Used (Retail Only)	\$	7.45 4,476.18	\$	7.45 4.535.21		7.45 6,251.27	\$ 7.45	\$ 7.45 \$ 5.145.99		\$ 8.80 \$(104,124.07)		\$ 8.31 \$ 5.233.72			\$ 7.90 \$ 4.797.51	(\$47.533.02)

5-Year Average Historical Consumption Expense

16 EA Avg. Annual Tons Used (Retail Only) 20,422

17 EA Avg. Annual Expense \$135,627

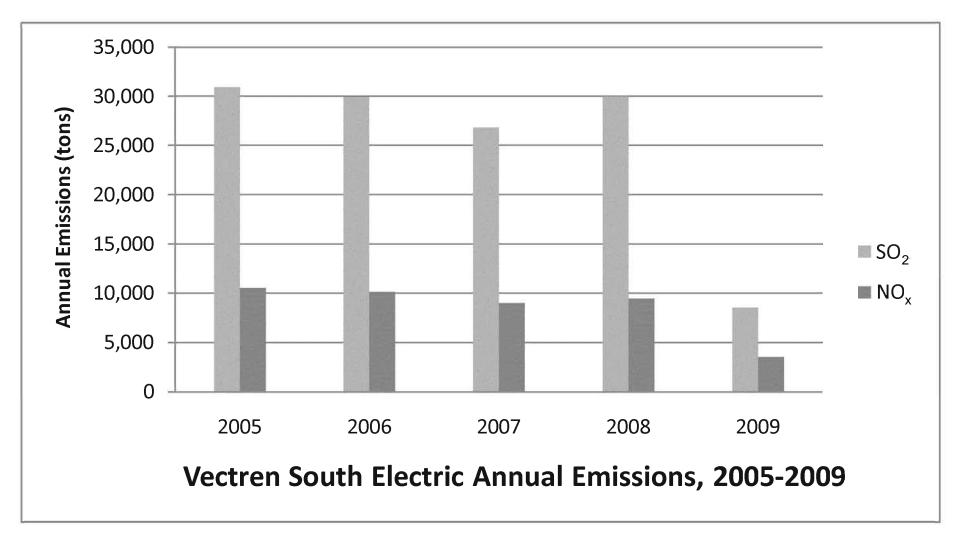
Note: Data from April 2005 through December 2005 was retrieved from Vectren South's Response to OUCC DR 20-25 (c), or OUCC Attachment CMA-2. Data from January 2006 through March 2010 was retrieved from Vectren South's Response to OUCC DR 18-1 (b), or OUCC Attachment CMA-1.

VECTREN SOUTH ELECTRIC MONTHLY EMISSIONS, 2005-2009

2005	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>TOTAL</u>
1 SO ₂ emitted (tons)	2,928	2,702	3,042	2,997	2,251	2,839	2,599	2,686	2,698	2,259	1,858	2,082	30,940
2 NO _x (tons)	1,231	1,149	1,235	971	431	489	511	583	522	1,160	1,059	1,215	10,556
2006	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>TOTAL</u>
3 SO ₂ emitted (tons)	2,546	2,150	2,596	2,239	2,553	2,532	2,189	2,948	2,984	2,557	2,095	2,536	29,926
4 NO _x (tons)	1,209	1,108	1,246	958	485	517	528	544	414	1,073	978	1,111	10,170
2007	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>TOTAL</u>
5 SO ₂ (tons)	2,349	2,059	1,914	2,065	2,494	2,121	2,418	2,729	1,395	2,311	2,432	2,528	26,816
6 NO _x (tons)	1,137	1,021	959	810	430	374	408	483	397	800	1,038	1,162	9,020
2008	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>TOTAL</u>
7 SO ₂ (tons)	2,233	2,529	2,562	2,613	2,325	2,998	2,871	2,784	3,247	2,896	1,296	1,611	29,963
8 NO _x (tons)	1,211	1,174	1,010	882	352	432	428	577	578	1,011	843	977	9,477
2009	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	TOTAL
9 SO ₂ (tons)	1,255	931	651	600	609	805	757	726	571	475	427	756	8,562
10 NO _x (tons)	592	387	268	260	296	311	238	271	193	188	220	328	3,552

Source: U.S. Environmental Protection Agency. Clean Air Markets Database. http://camddataandmaps.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard.

Note: Since Vectren owns 50% of Alcoa's Warrick Unit 4, emissions from Warrick Unit 4 were assumed to be 50% of emissions recorded by the EPA's Clean Air Markets Database for that unit.



Source: U.S. EPA. Clean Air Markets Database. http://camddataandmaps.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard

Note: Warrick Unit 4 Emissions were assumed to be 50% of the emissions reported on the Clean Air Markets Database, to account for Vectren's 50% ownership of that unit.

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.

By: Cynthia M. Armstrong

Indiana Office of

Utility Consumer Counselor

June 25, 2010

Date

Cause No. 43839